

JETP Letters 2012 vol.96 N6, pages 370-374

Structure and transport properties of stephanite (Ag₅SbS₄) according to antimony nuclear quadrupole resonance

Orlova A., Gainov R., Dooglav A., Pen'kov I., Korolev E.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Silver sulfo-antimonide Ag₅SbS₄ (stephanite) has been studied by nuclear quadrupole resonance (NQR) spectroscopy on antimony nuclei. The temperature dependences of the spectroscopic and relaxation parameters have been examined in the range of 4.2-395 K. A phase transition at 140 K and internal motions with an activation energy of 0.29 eV have been experimentally detected. The nature of the phase transition and diffusion of silver ions has been discussed in view of the reported data. © 2012 Pleiades Publishing, Ltd.

<http://dx.doi.org/10.1134/S0021364012180099>
